



**SIMI VALLEY LANDFILL & RECYCLING CENTER**  
A WASTE MANAGEMENT COMPANY

2801 Madera Road  
Simi Valley, California 93065  
(805) 579-7267  
(805) 579-7482 Fax

August 16, 2000

Mr. Gerard Kapuscik  
Manager, Planning and Recycling Division  
Ventura County  
Solid Waste Management Department  
800 South Victoria Avenue  
Ventura, California 93009

**Subject: Comments to August 8, 2000 Letter Re: Remaining Capacity  
Simi Valley Landfill and Recycling Center**

Dear Mr. Kapuscik:

The Simi Valley Landfill and Recycling Center (SVLRC), in follow-up to our telephone conversation today regarding the subject letter, submits the following comments for your consideration.

The 1,485 lbs/cy refuse density value utilized in your calculations is an average number based on the four most recent aerial surveys conducted by the SVLRC, as outlined in my May 31, 2000 letter to you. Also noted in this letter, the density value for the survey period of 5-5-99 through 11-3-99 resulted in a very high value of 1,922 lbs/cy. This value was probably impacted by a number of variables, with the most significant being the utilization of ADC and secondary settlement of the underlying waste. To provide a more conservative average density value for site life projections, I proposed the adjustment of the 1,922 lbs/cy value to exclude the ADC tonnage, with a resulting adjusted density of 1,624 lbs/cy for this period. The three other density values used to calculate the average value of 1,485 lbs/cy included any ADC tons utilized during these survey periods.

Historically, we have calculated refuse density by dividing the total tons of waste accepted (this includes MSW, waste derived ADC, asphalt/concrete, and dirt) and dividing by the volume of airspace consumed during the survey period. Our density calculation does not exclude or deduct the volume of daily cover soil utilized during the survey period. The calculated density values provided by A-Mehr, Inc. are consistent with this approach (see attached table which presents the survey data). If daily cover soil volume used during the period were to be deducted, the calculated density would be correspondingly higher because the calculation would be done with the same tons of waste but they would be divided by a smaller volume of consumed airspace. See attached graphical illustration.

When calculating the projected site life, the treatment of daily cover must be consistent with all input data being used in the site life calculation. Because our average refuse density value is calculated without excluding the daily cover, it is inappropriate to deduct the projected daily cover soil volume from the net remaining capacity when calculating the projected remaining tonnage capacity and the associated site life. By removing the projected

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daily cover volume and using the 1,485 lbs/cy density (which includes daily cover and is correspondingly lower), the remaining capacity value is being reduced twice for the same volume of soil (once in the average density value and once by the direct volume deduction). This double deduction of daily cover soil is the primary difference between your calculated remaining site life and the SVLRC calculated value.

Thank you for the opportunity to review and provide comments to this very important document. If you have any questions or require additional information, please contact me at 805-579-7267. Thank you.

Sincerely



Frank Kiesler  
District Manager

Cc: Elizabeth Ooms-Graziano  
Carolyn Lin  
File

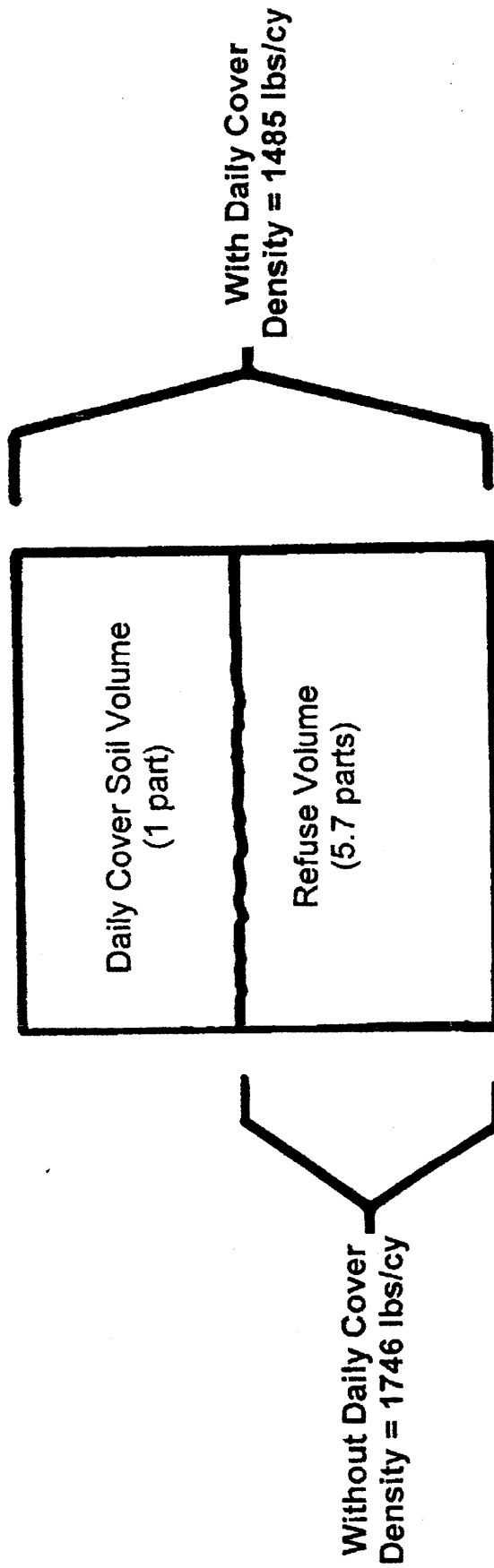
**Average Density Calculation  
Simi Valley Landfill  
11-3-97 thru 11-3-99**

<b>Survey Period</b>	<b>5-5-99 thru 11-3-99</b>	<b>11-20-98 thru 5-4-99</b>	<b>5-19-98 thru 11-19-98</b>	<b>11-3-97 thru 5-18-98</b>
<b>Total Tons Accepted</b>	265,173	245,799	316,502	331,835
<b>Airspace Consumed</b> cubic yards	326,638	346,477	435,626	459,365
<b>Calculated Density</b> pounds/cubic yard	1,624	1,419	1,453	1,445
<b>Average Density =</b>	<b>1,485</b>	<b>pounds/cubic yard</b>		

- Notes:**
- 1 "Total Tons Accepted" includes all waste tons and waste derived materials recycled on site (asphalt/concrete, dirt, ADC) except for the period from 5-5-99 thru 11-3-99 which has been calculated w/o ADC.
  - 2 "Airspace Consumed" represents the total airspace consumed in the survey period. No adjustments or deductions for daily cover soil have been made.
  - 3 Source of "airspace consumed" values and "calculated density" values is A-Mehr, Inc. reports generated for each survey period.

# Density Comparison

Density with Daily Cover vs. Density Without Daily Cover



**county of ventura**  
**Public Works Agency**  
**Solid Waste Management Department**



**KAY MARTIN**  
Deputy Director of  
Public Works

August 8, 2000

**VIA FACSIMILIE NO. 805-579-7482**  
**HARD COPY VIA U.S. MAIL**

Frank Kiesler, District Manager  
Simi Valley Landfill and Recycling Center  
Waste Management of California  
2801 Madera Road  
Simi Valley, CA 93065

**SUBJECT:** Simi Valley Landfill and Recycling Center  
Remaining Landfill Capacity and Site Life Projections  
Proposed for Year 2000 Updated Countywide Siting Element

Dear Mr. Kiesler:

The Solid Waste Management Department (SWMD) greatly appreciates the receipt of the information submitted by Waste Management of California (WMC) which provided your most recent estimates of the remaining capacity and site life at the Simi Valley Landfill and Recycling Center (SVLRC).

SWMD's staff has completed a review of the aforementioned SVLRC site information, as well as the information contained in the SVLRC Airspace Volume Calculation Reports, dated June 11 and December 20, 1999, and the Clay and Cover Report, dated February 25, 2000, both submitted by A-Mehr, Inc., your consulting engineers.

We have reviewed this information with great interest as we finalized the preparation of the Year 2000 Updates to the Countywide Siting Element (CSE) of the Countywide Integrated Waste Management Plan (CIWMP). Your information greatly assisted us in our work to develop more realistic SVLRC site capacity projections for the CSE.

However, **before** we finalize the CSE planning document and submit it to the Board of Supervisors for their approval, we wanted to review with you via this letter, one last time, some of the facts and assumptions we used in preparing our **latest revised** SVLRC capacity and site life and projections.

**Site Capacity Assumptions**

Based on our review of the information in your May 31<sup>st</sup> letter, it appears that SVLRC Gross Tons Landfilled (**including** waste, ADC, dirt and inert A/C) was divided by Remaining Net Capacity to calculate SVLRC Gross Density. ADC, dirt **and** Asphalt/Concrete (A/C) was then removed from the period ending November 3, 1999.

*Dedicated to Recovering and Recycling our Natural Resources*



Frank Kiesler  
Waste Management of California  
August 8, 2000  
Page 2 of 4

You then appear to have calculated density, and averaged it with other gross densities (which, we believe, **include** waste and incoming dirt and A/C but not ADC) to get a SVLRC compacted, incoming waste density figure of **1,485 lbs/cy**.

If the volume of stockpiled daily cover material used at SVLRC is assumed **not** to intermingle with the compacted waste, then daily cover volume could be subtracted from total airspace (as in A-Mehr, 6/11/99). We reviewed your May 31<sup>st</sup> letter carefully, but we could **not** find that WMC had taken this step.

In preparing our revised SVLRC site capacity projections, we chose to **exclude** stockpiled daily cover volume used, based on an average waste to cover ratio of 5.7:1 (See A-Mehr, 2/25/00). Therefore, we calculated SVLRC's remaining volumetric capacity for compacted waste, dirt and A/C, **as of November 3, 1999**, using the following calculation:

Remaining Net Capacity up to 11/3/99	10,499,231 CY
Stockpiled Daily Cover soil needed	- 1,567,049 CY
Remaining Volumetric Capacity as of 11/3/99	<b>8,932,182 CY</b>

Assuming that ADC **won't** be used, we converted the aforementioned volumetric capacity to tonnage capacity remaining for compacted waste, dirt and A/C by the following calculation: 8,932,182 cy X (1,485 lbs/cy / 2,000 lbs/ton) = **6,632,145 tons**.

#### Closure Scenario

Based on information contained in your 1999 Waste Receipt Questionnaires (WRQs), we estimated the amount of incoming dirt and A/C at SVLRC using the following calculation: 27,802.44 tons/yr X 12.2 years = **339,184 tons of inerts**.

We then determined a **remaining SVLRC site life of 12.2 years** using iterations of trial and error of dividing the estimated tons capacity by 506,925.77 DRS tons at SVLRC in 1999 (or 1,625 tons/day), as shown below.

Calculating available capacity for compacted DRS waste only beyond 11/3/99:  
6,632,145 tons – 339,184 tons inerts = **6,292,960 tons**.

Calculating two months compacted DRS tonnage: 2 / 12yr X (6,292,960 tons/12.2yrs) = **85,969 tons**. Subtracting for November and December 1999: 6,292,960 tons – 85,969 tons = **6,206,990 tons capacity** for compacted DRS beyond 1/3/00.

Calculating remaining SVLRC site life: 6,206,990 tons / 506,926 t/yr = 12.2 years beyond 1/3/00, if filled at the 1999 SVLRC rate.

Therefore, based on the above calculations, we feel that a more appropriate starting tonnage capacity for the SVLRC DRS capacity projection in CSE Tables 2-1 and 2-2 is **6,206,990 tons**.

Frank Kiesler  
Waste Management of California  
August 8, 2000  
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Revised Tables 2-1 and 2-2, showing that figure, are enclosed for your review. (We also revised the linear regression equations using the latest 1999 DRS tons.)

We assumed that actual waste flowing into the SVLRC in the future would reach its **permitted maximum of 3,000 tons per day**. Based on that assumption, we estimated a minimum SVLRC site life beyond 1/3/00, using the following calculation:

$$\begin{aligned} 3000 \text{ tons/day} \times 312 \text{ days/yr} &= 936,000 \text{ tons/yr.} \\ 6,206,990 \text{ tons} / 936,000 \text{ tons/yr} &= \\ \mathbf{6.6 \text{ years beyond 1/3/00.}} \end{aligned}$$

Because the CIWMB's regulations governing the preparation of the CSE require that we convert compacted DRS tons to estimated cubic yards, we used a weight to volume conversion figure of **1,200 lbs/cy** for the **combined** remaining tons at Toland and Simi Valley Landfills in the preparation of Revised CSE Tables 2-1 and 2-1.

### Expansion Scenario

We have calculated the remaining site life, volumetric and tonnage capacities at SVLRC, should your expansion proposal be approved, by using the following calculations:

Your 6/8/00 letter reported total airspace available:	43,900,000 cy
- <u>permitted airspace available</u>	<u>23,700,000 cy</u>
expansion airspace	20,200,000 cy
expansion acres	185.3
- <u>permitted acres</u>	<u>135.2</u>
<b>additional acres</b>	<b>50.1</b>

Final cover rate, from A-Mehr, 6/11/99, 763,600 cy/135.2 acres = 5,647.93 cy/ac.  
Estimating additional final cover needed: 5,647.93 cy/ac X 50.1 ac = **282,961 cy**.

Calculating remaining airspace for waste, ADC and incoming inerts:	
expansion airspace	20,200,000 cy
- <u>additional final cover needed</u>	<u>282,961 cy</u>
<b>remaining airspace</b>	<b>19,917,039 cy</b>

Estimating stockpiled daily cover needed:	<u>19,917,039 cy</u>	
From A-Mehr, 2/25/00, waste to cover ratio	(5.7+1)	= 2,972,692 cy
remaining airspace	19,917,039 cy	
- <u>daily cover needed:</u>	<u>2,972,692 cy</u>	

**Remaining airspace for DRS, ADC & incoming inerts** **16,945,547 cy**

Calculating remaining tonnage capacity for DRS and incoming inerts (assuming no ADC): 16,945,547 cy X 1,485 lbs/cy / 2000 lbs/T = **12,582,069 tons**

Frank Kiesler  
Waste Management of California  
August 8, 2000  
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Estimating site life:  $12,582,069 \text{ tons} / 507,000 \text{ tons/yr in 1999} = 24.8 \text{ yrs}$   
From 1999 WRQ's, Est. incoming inerts:  $27,800 \text{ tons/yr} \times 24.8 \text{ yrs} = 689,904 \text{ tons}$   
Estimating DRS capacity:  $12,582,069 \text{ tons} - 689,904 \text{ tons} = 11,892,165 \text{ tons}$   
Re-estimating site life:  $11,892,165 \text{ tons} / 507,000 \text{ tons/yr} = 23.4 \text{ yrs.}$   
Re-estimating inerts:  $27,800 \text{ tons/yr} \times 23.4 \text{ yrs} = 652,075 \text{ tons.}$   
Re-estimating DRS cap.:  $12,582,069 \text{ tons} - 652,075 \text{ tons} = 11,929,994 \text{ tons.}$   
Re-estimating site life:  $11,929,994 \text{ tons} / 507,000 \text{ tons/yr} = 23.5 \text{ yrs.}$   
Calculating inerts:  $27,800 \text{ tons/yr} \times 23.5 \text{ yrs} = 654,150 \text{ tons.}$

**Calculating remaining DRS capacity:**

**$12,582,069 \text{ tons} - 654,150 \text{ tons} = 11,927,919 \text{ tons.}$**

Checking site life:  $11,927,919 \text{ tons} / 507,000 \text{ tons/yr} = \mathbf{23.5 \text{ years.}}$

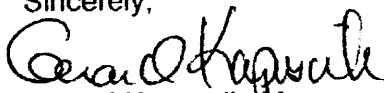
The above figures are the ones we think should be added to Remaining In-County **CAPACITY** for compacted DRS at the end of 2004 in the CSE Table 2-2 (See Attached).

We would greatly appreciate it if you would review the SVLRC site life and capacity projections we propose in this letter and provide us with your **written comments by no later than Wednesday, August 16, 2000.**

We plan on asking the Ventura County Board of Supervisors to release the revised and updated Year 2000 CSE for public review, comment and adoption by the cities and county during their **September 12, 2000 regular meeting.**

Should you have any questions regarding this letter, or wish to discuss it further, please feel free to contact me directly at **648-9241**, or Richard Sweet at 654-3976.

Sincerely,



Gerard Kapuscik, Manager  
Planning and Recycling Division

Attachments (Revised CSE Tables 2.1 and 2.2)

Pc: Kay Matin, Dep. Dir., PWA, SWMD  
Richard Sweet, WMA, SWMD



8/4/00 DRAFT

SEP-26-2000 01:23

	Remaining Site Life CAPACITY Tons 1/01/00	DISPOSAL Tons calendar year 1999	DISPOSAL Tons calendar year 1998
		(WMX 1999 Material Receipt Questionnaires & Questionnaires & (VRSD 1999 Material Receipt Questionnaires & Questionnaires & (VRSD, Dec 1999, waste receipt questionnaire)	
SVLF	6,206,990 12/20/99 & 2/25/00)	506,926 DRS)	602,894 DRS
Toland Total in county capacity	13,091,646 (questionnaire)	314,780 DRS)	318,097 DRS
	19,298,636	821,706 DRS	920,991 DRS
SVLF % of total disp. Tolands %		62% 38%	65% 35%
1999 In-County DRS disposal SVLF:	427,232.73	58.59% excludes imports	
1999 In-County DRS disposal Toland:	302,014.22	41.41% excludes imports	
	729,246.95		

96%

P. 10

8/4/00 DRAFT

## Ventura County Landfill Capacity Projection: Simi Valley Landfill Closure Scenario

Calendar Year	Total Generation (Tons)	Diversion (%)	Ventura Co. and Cities' Total DISPOSAL at all Landfills (Tons)	Ventura Co. and Cities' EXPORT (Tons)	Out of County IMPORT To Toland and Simi (Tons)	Disposal by In-County Landfills (Tons)	In County + Import Toland Tonnage Projection, 1,500 T/day limit (Tons)	Available Toland Capacity, 1,500 T/day limit (Tons)	In County SVLF Tonnage Projection, 3000 T/day limit (Tons)	Available Simi Capacity, 6/2004 closure, 3000 T/day limit (Tons)	Remaining In-County CAPACITY for compacted DRS at the end of Calendar Year (Tons)	In-County SHORT-FALL (Tons)	Remaining In-County CAPACITY for compacted DRS at the end of Calendar Year (Cubic Yards)
1998			856,043	147,660	212,608	920,997		13,091,646		6,206,990	19,298,636	0	32,164,393
1999			862,413	133,166	92,459	821,706		12,767,886	429,670	5,557,999	18,325,685	0	30,542,809
2000	1,758,738	50%	879,369	146,019	239,601	972,951	323,960	12,433,294	444,429	4,871,297	17,304,592	0	28,840,986
2001	1,807,944	50%	903,972	145,432	282,553	1,021,094	334,392	12,088,471	459,188	4,146,884	16,235,355	0	27,058,926
2002	1,857,151	50%	928,575	144,844	285,505	1,069,236	344,823	11,733,217	473,947	3,384,760	15,117,976	0	25,196,627
2003	1,906,357	50%	953,179	144,257	308,457	1,117,379	355,255	11,265,217	488,707	2,987,711	14,252,928	142,039	23,754,879
2004	1,955,564	50%	977,782	285,708	172,976	865,049	365,686	10,797,217	503,466	0	10,797,217	411,583	17,995,361
2005	2,004,770	50%	1,002,385	554,665	20,280	468,000	376,118	10,329,217	518,225	0	10,329,217	436,774	17,215,361
2006	2,053,976	50%	1,026,988	579,268	20,280	468,000	386,549	9,861,217	532,984	0	9,861,217	461,965	16,435,361
2007	2,103,183	50%	1,051,591	603,871	20,280	468,000	396,980	9,393,217	547,744	0	9,393,217	487,156	15,655,361
2008	2,152,389	50%	1,076,195	628,475	20,280	468,000	407,412	8,925,217	562,503	0	8,925,217	512,346	14,875,361
2009	2,201,596	50%	1,100,798	653,078	20,280	468,000	417,843	8,457,217	577,048	0	8,457,217	537,172	14,095,361
2010	2,250,072	50%	1,125,036	677,316	20,280	468,000	428,124	7,989,217	592,021	0	7,989,217	562,728	13,315,361
2011	2,300,008	50%	1,150,004	702,284	20,280	468,000	438,706	7,521,217	606,781	0	7,521,217	587,918	12,535,361
2012	2,349,215	50%	1,174,607	726,887	20,280	468,000	449,138	7,053,217	621,540	0	7,053,217	613,109	11,755,361
2013	2,398,421	50%	1,199,211	751,491	20,280	468,000	459,569	6,585,217	636,299	0	6,585,217	636,299	10,975,361
2014	2,447,628	50%	1,223,814	774,093	11,872	461,592	468,000	6,117,217	651,058	0	6,117,217	651,058	10,195,361
2015	2,496,834	50%	1,248,417	788,265	1,292	461,444	468,000	6,117,217	651,058	0	6,117,217	651,058	10,195,361

8/4/00 REVISED DRAFT

## Ventura County Landfill Capacity Projection: Simi Valley Landfill Extension Scenario

Calendar Year	Total Generation (Tons)	DIVERSION (%)	Ventura Co. and Cities' Total DISPOSAL at all Landfills (Tons)	Ventura Co. and Cities' EXPORT (Tons)	Out of County IMPORT Tons To Tolid and (Tons)	Annual DISPOSAL NEEDS met by In-County Landfills (Tons)	Available Tolid Capacity, 1,000 T/day (Tons)	Available Sling Capacity, 3,000 T/day (Tons)	Remaining In-County CAPACITY for compacted DRS at the end of Calendar Year (Tons)	In-County SHORT-FALL (Cubic Yards)	change in needs
1998	856,043		147,660	212,608	920,991	920,991	6,206,990	19,299,638	0	32,164,383	0
1999	859,068		132,978	95,619	821,706	821,706	6,557,986	18,325,686	0	30,542,809	0
2000	879,368	50%	146,019	239,601	972,951	972,951	6,857,986	17,304,592	0	28,840,988	0
2001	1,758,738	50%	903,972	262,593	1,021,084	1,021,084	7,158,986	16,236,355	0	27,058,926	0
2002	1,867,944	50%	928,576	285,505	1,098,236	1,098,236	7,458,986	15,117,875	0	25,165,027	0
2003	1,956,357	50%	953,178	308,457	1,117,375	1,117,375	7,758,986	14,000,374	0	23,271,966	0
2004	1,955,984	50%	977,782	331,409	1,165,522	1,165,522	8,058,986	12,882,880	0	21,377,944	0
2005	2,004,770	50%	1,002,385	354,361	1,213,664	1,213,664	8,358,986	11,765,388	0	19,483,922	0
2006	2,053,978	50%	1,026,988	377,313	1,261,807	1,261,807	8,658,986	10,647,891	0	17,589,900	0
2007	2,103,183	50%	1,051,591	400,263	1,308,950	1,308,950	8,948,986	9,529,891	0	15,695,878	0
2008	2,152,389	50%	1,076,195	423,217	1,358,093	1,358,093	9,238,986	8,400,891	0	13,801,856	0
2009	2,201,595	50%	1,100,798	446,169	1,406,235	1,406,235	9,528,986	7,271,891	0	11,907,834	0
2010	2,250,802	50%	1,125,401	469,121	1,454,378	1,454,378	9,818,986	6,144,891	0	10,013,812	0
2011	2,300,008	50%	1,150,004	492,073	1,502,521	1,502,521	10,108,986	5,016,891	0	8,119,790	0
2012	2,349,215	50%	1,174,607	515,025	1,550,663	1,550,663	10,400,986	3,888,891	0	6,225,768	0
2013	2,398,421	50%	1,199,210	538,981	1,598,806	1,598,806	10,692,986	2,760,891	0	4,331,746	0
2014	2,447,628	50%	1,223,814	562,935	1,646,949	1,646,949	10,984,986	1,632,891	0	2,437,724	0
2015	2,496,834	50%	1,248,417	586,881	1,695,092	1,695,092	11,276,986	50,891	0	16,470,360	0

1) All values are reported tons. 1998 and 1999 EXPORTS, IMPORTS and Tonnage NEEDS are from the Disposal Reporting System (DRS). Available 1998 Tolid Capacity is from the Ventura Regional Sanitation District's December 1998 Waste Receipt Questionnaire submitted to the County of Ventura Solid Waste Management Department (SWMD). Available 1999 Tolid Capacity is from Waste Management of California's December 1998 Five-Year Solid Waste Facility Review and their 1999 Annual Status Report, dated February 25, 2000, to the Ventura County Planning Department. Remaining In-County CAPACITY at the end of 1999 is the sum of Tolid and SVLF Capacity for compacted DRS.

2) 1998 and 1999 calculated DISPOSAL tons = NEEDS + EXPORTS - IMPORTS.

3) Beginning in 2000, Ventura County jurisdictions' total yearly DISPOSAL tons is estimated to increase by the sum of quarterly disposal as calculated using a linear regression plot of DRS quarterly disposal between 1995 through 1999. Projected Disposal per quarter =  $1537.7x + 183,244$ , where  $x$  is the projected quarter.

4) Beginning in 2000, EXPORTS were estimated using a linear regression plot of DRS tons between 1995 through 1999. Projected Exports per quarter =  $39,459x + 37,351$ , where  $x$  is each of the projected quarters.

5) Imports to Tolid are limited by a CUP maximum of 65 tons/day or 65 x 312 days = 20,260 tons/year from Carpentaria.

6) Total IMPORTS were projected to increase as the sum of the Tolid Landfills maximum import from Carpentaria plus the Simi Valley Landfills (SVLF) imports based on a linear regression plot of its 1995 through 1999 DRS imports. Projected Imports per quarter =  $20,260x + 14,354.5x + 22,554$ , where  $x$  is each of the four projected quarters in the year.

7) Beginning in 2000, annual disposal tonnage NEEDS were calculated as DISPOSAL - EXPORTS + IMPORTS.

8) Tolid may receive up to 1500 tons/day x 312 days/year = 468,000 tons/year. Tolid received 41.4% of in-County disposed tons in 1998.

9) In 2000 through 2013, available Tolid Capacity = (Tolid's Capacity from previous year) -  $41.4\% \times$  (calculated total DISPOSAL tons - EXPORT tons) - 20,260 imported tons. In 2014 and 2015, Tolid's maximum capacity of 468,000 tons was subtracted from Tolid's previous year Capacity.

10) Remaining in-County CAPACITY (at the end of the current year) was calculated by subtracting the previous year's NEEDS from the previous year's remaining in-County CAPACITY. In 2004, SVLF Capacity will be increased by 11,927,919 tons per Waste Management of California's June 8, 2000 letter to SWMD regarding the draft Countywide Siting Element.

11) Available Simi Capacity was calculated by subtracting Tolid's current year Capacity from the current year's in-County CAPACITY.

12) DIVERSION was assumed to be 50% in 2000 and beyond.

13) GENERATION was calculated by dividing Disposal by 50%.

14) Cubic yards was estimated for compacted DRS tons by dividing tons by 0.6 tcy (based on 1200 lbs/cy estimated) for the combined tons from Tolid and Simi Valley Landfills.

CSE capacity projection ver3.48Capacity with SVLF Exp

VCSWMD

GIC

Ltr. by GIC

RECEIVED  
JUN 02 2000

By: R. Sweet 6/5/00

SIMI VALLEY LANDFILL & RECYCLING CENTER  
A WASTE MANAGEMENT COMPANY2801 Madera Road  
Simi Valley, California 93065  
(805) 579-7267  
(805) 579-7482 Fax

May 31, 2000

Mr. Richard Sweet  
Waste Management Analyst  
Ventura County Solid Waste Management Department  
800 S. Victoria Avenue  
Ventura, CA 93009

W 6/15/00  
Notes by R/S

**Subject:** Remaining Site Capacity  
Simi Valley Landfill and Recycling Center

Dear Mr. Sweet:

This letter is submitted to address the question of remaining permitted disposal capacity at the Simi Valley Landfill.

Our most recent aerial flyover and topographic mapping, for which we have complete data, was conducted on November 3, 1999. The topographic map, developed from this event, compared with the permitted final grades indicates 11,262,831 cubic yards of remaining gross capacity. Remaining gross capacity includes the volume of the final cover (763,600 cy), which, when deducted results in a net capacity of 10,499,231 cy. Net capacity includes in-place refuse and daily cover.

To determine remaining tonnage capacity it is necessary to assume an in-place density for the refuse and daily cover. Because density is impacted by so many variables (i.e. rainfall, waste types, incoming volumes, location within the landfill, secondary landfill settlement, ADC usage etc.), it has the potential to vary considerably over any period of study. Therefore, review and thoughtful use of past calculated densities is the appropriate approach for establishing an assumed density to be used for the site life calculations. The past four topographic mapping events resulted in calculated densities of 1922 lbs/cy, 1419 lbs/cy, 1450 lbs/cy, and 1445 lbs/cy. The 1922 lbs/cy density is striking because it is significantly out of line with the other historic values. This high density was achieved as a result of the use of treated auto shredder waste (TASW) as ADC. This material is not presently being accepted and will only be accepted in the future when refuse placement occurs over Subtitle D lined areas. Due to the uncertainty of using this or any other ADC material in significant quantities, it is unlikely the density of 1922 lbs/cy will be approached with any regularity, therefore, the value is disregarded for the purposes of calculating site life. If the period represented by the 1922 lbs/cy value is recalculated ignoring the TASW ADC, the resulting density value is 1624 lbs/cy, which is a much more reasonable value. Using this value and the other three density values, the average in-place refuse density is 1485 lbs/cy.

Dpt 4AC

WASTE ADC  
CIPAL = 1922  
EUT. WASTE  
FILL CO.SEE  
A-MK  
12/20/00

Estimated remaining tonnage capacity for the site, using the following values, calculates as follows:

	WASTE + DAILY COVER	EST. VOL. DAILY COVER	EST. VOL. ADG. A/C + DIRT	REMAINING CAPACITY FOR REFUSE + SLUR
Remaining Net Capacity	=	10,499,231 cy	1,567,049	
In-Place Density	=	1485 lbs/cy		
Estimated Remaining Tonnage Capacity	=	8,932,182 cy		
	=	(10,499,231 cy X 1485 lbs/cy) / 2000 lbs/ton		
	=	7,795,679 tons		

8,932,182 cy  $\cdot \frac{1485 \text{ lbs}}{2000 \text{ lbs}} = 7,795,679 \text{ tons}$

Assuming acceptance of maximum daily permitted refuse tonnage of 3000 tpd and 312 operating days/year (six days/week), the remaining operating years calculates as follows:

6,632,155 tons  $\cdot \frac{1485 \text{ lbs}}{2000 \text{ lbs}} = 19,697,471 \text{ INCOMING TONS}$

Estimated Operating Years  $\frac{7,795,679 \text{ tons}}{3000 \text{ tpd} \times 312 \text{ days/year}} = 8.33 \text{ years}$

21

Attached for your reference and convenience is a table summarizing the above calculations.

I hope this information is adequate for your uses, and I apologize for any confusing or erroneous data that may have been submitted previously. Please contact me at 805-579-7267 if you have any questions or require additional information. Thank you.

Sincerely,

*Frank Kiesler*

Frank Kiesler  
District Manager

RATIO OF WASTE : COVER = 5.7 : 1 PER A-MEMO, 8/20/99 AMPLIFIED  
4/25/00 COVER

$\frac{10,499,231}{1+5.7} = 1,567,049 \text{ CY DAILY COVER}$

CC: Elizabeth Ooms-Graziano  
Carolyn Lin

REMAINING CAPACITY  
FOR WASTE, ADG. DIRT + INFILL

8,932,182 cy  $\cdot \frac{1485 \text{ lbs}}{2000 \text{ lbs}} = 6,632,155 \text{ TONS}$

6,632,155 tons  $\cdot \frac{1485 \text{ lbs}}{2000 \text{ lbs}} = 19,697,471 \text{ INCOMING TONS CAPACITY}$

8,932,182 cy  $\cdot \frac{1200 \text{ lbs}}{2000 \text{ lbs}} = 5,359,309 \text{ TONS}$

2-CSE 6,632,155 T

$\frac{6,632,155 \text{ T}}{2 \text{ CSE}} = 3,316,077.5 \text{ T}$

Simi Valley Landfill  
Existing Site Life Projection

Date of Calculation = 11/3/99

Remaining Gross Permitted Capacity = 11,262,831 cy  
Final Cover Volume = 763,600 cy

Remaining Net Refuse Capacity = 10,499,231 cy  
*ADG, INSERTS, & DAILY TAIL*

*USED TO SUBTRACT FROM GROSS VOL. ADJUSTMENT*  
In-Place Refuse Density = 1,485 lbs/cy

Remaining Refuse Tonnage Capacity = 7,795,679 tons

Maximum Permitted Disposal Tonnage = 3,000 tons

Operating Days/Year = 312 days

Remaining Operating Days at Max. Daily Tonnage = 2,599 days

Remaining Operating Years at Max. Daily Tonnage = ~~8.33~~ years

*INFORMING (HKS) DIFFERENCE  
DENSITY: 1.50 TO  
1.60 lbs/cy*

**county of ventura**  
**Public Works Agency**  
**Solid Waste Management Department**



May 25, 2000

**KAY MARTIN**  
Deputy Director of  
Public Works

Frank Kiesler, District Manager  
Simi Valley Landfill and Recycling Center  
2801 Madera Road  
Simi Valley, CA 93065

**SUBJECT: Confirmation of Refuse Capacity at Simi Valley Landfill**

Dear Mr. Kiesler:

We provided for your review, copies of the April 2000 Final Drafts of the Summary Plan (SP) and Countywide Siting Elements (CSE) of the Ventura County Integrated Waste Management Plan (CIWMP). As I have discussed with Elizabeth Ooms-Graziano, we used 5,272,361 tons as available capacity for refuse only at the Simi Valley Landfill and Recycling Center (SVLRC) as of January 1, 1999, in Chapter 2 of the CSE, Tables 2-1 and 2-2. We obtained this number from Attachment III of your 2000 Final Rate Adjustment, dated October 25, 1999. This number is based on 5,629,452 tons as of May 4, 1999, in Attachment III. I would like your staff's confirmation that this number was a reasonable basis for making our capacity projections in our CSE where we subtracted projected DRS tons only.

Although I have additionally reviewed the capacity projections included in Appendix A of the SVLRC Solid Waste Facility Permit Review Report to the Ventura County Environmental Health Division, dated December 1999, I have been unable to verify the 5,629,452 tons. I therefore request an explanation of how the 5,629,452 tons was obtained.

Please have your staff contact me at 654-3976 to discuss this issue. I would appreciate a written calculation of how the 5,629,452 tons was determined submitted via fax at 648-9233 by 5/30/2000. If you have any questions regarding this item, please contact me directly at (805) 654-3976 or Gerard Kapuscik, Manager, Planning and Recycling Division at 648-9241.

A handwritten signature in cursive script, reading "Richard A. Sweet".

Richard A. Sweet, Waste Management Analyst

Pc: Gerard Kapuscik  
Elizabeth Ooms-Graziano



*Dedicated to Recovering and Recycling our Natural Resources*  
\\SRV\_SOLID\_WASTE\\VOL1\\SWMD\\Shared\\CIWMP\\SVLRC\_D-CSE&SP.doc

800 S. Victoria Avenue, Ventura, CA 93009-1650 (805) 654-2889 FAX (805) 648-9233



10/20/99

SVL 2000 Final Rate Adjustment**ATTACHMENT III****Simi Valley Landfill  
Capacity Estimate**

Estimated tonnage capacity based on May 4, 1999 Aerial Mapping and EMD estimates.

8,660,695 cubic yards of refuse <sup>only</sup> @ 1,300 lbs. per yard.

8,660,695 x (1,300 lbs./2,000) = 5,629,452 tons of refuse.

	04-May-99	5,629,452
Balance of	May-99	(37,003)
	Jun-99	(43,714)
	Jul-99	(43,057)
	Aug-99	(44,518)
	Sep-99	(45,099)
*	Oct-99	(49,400)
*	Nov-99	(47,500)
*	Dec-99	(46,800)
	01-Jan-2000	<u>5,272,361</u>

RS → NC, GY 9/31/00

FRANK KIESLER SAID  
I SHOULD NOT USE THIS.  
IT IS QUITE DIFFERENT  
FROM A-MECH, INC.'S  
#S, ASSOCIATED.

\* Estimates

**SIMI VALLEY LANDFILL SITE LIFE ESTIMATE**

Estimated Capacity @ 05/04/99	5,629,452
Capacity used May 5, 1999 through September	(213,391)
Estimated Capacity used October 99 to December 99	(143,700)
Estimated January 1, 2000 remaining capacity	5,272,361 TO/IS RETAIN ON



# **APPLICATION FOR FIVE-YEAR REVIEW OF PERMITS**

**FOR**

## **SIMI VALLEY LANDFILL AND RECYCLING CENTER**

*Prepared for:*

**Simi Valley Landfill & Recycling Center  
2801 Madera Road  
Simi Valley, CA 93065**

*Prepared by:*

**A-Mehr, Inc.  
237 N. Glassell St.  
Orange, CA 92866**

**DECEMBER 1999**

# **Simi Valley Landfill and Recycling Center**

## **Airspace Volume Calculation Report**

**November 20, 1998 Through May 4, 1999**

Prepared for:

Waste Management of California, Inc.  
Simi Valley Landfill and Recycling Center  
2801 Madera Road  
Simi Valley, California 93065  
(805) 579-7267

Prepared by:

A-Mehr, Inc.  
237 North Glassell Street  
Orange, California 92688  
714-633-5757  
Fax 714-633-5665

**June 11, 1999**

**Simi Valley Landfill and Recycling Center  
Airspace Volume Calculation Report  
November 20, 1998 Through May 4, 1999**

This report presents the results of airspace volume calculations, using topographical maps dated November 19, 1998 and May 4, 1999, prepared by A-Mehr, Inc.

**Methodology**

To determine the remaining airspace, a drawing was created for landfill cells B-2, B-3 and C which included liner base grades, the May 4, 1999, topographic data and the permitted final grades. The remaining airspace was then calculated using the Terramodel computer software. Since the resulting volume includes stockpiled soil, a separate calculation of the soil stockpile was made using known information about the original volume of the stockpile and withdrawals from it over the last three years.

The resulting estimated volume of the stockpiled soil was then added to the computer-calculated airspace to obtain the gross remaining airspace available for waste, daily cover and final cover.

Final cover soil requirement was calculated assuming a 3.5 foot thick cover over the 135.2 acre area of the remaining permitted footprint. Subtracting this volume from the gross remaining airspace results in the net airspace available for waste and daily cover material.

Current density and cover soil usage were calculated as follows. Airspace used during the period November 20, 1998 - May 4, 1999 was determined from the two topographic surveys using the Terramodel software. Cover soil usage for the period was also determined using topographic data from the soil stockpile area. Waste tonnage for the period was obtained from Simi Valley Landfill scalehouse records. The compacted waste density and waste:cover soil ratio were readily calculated.

**Results**

Net Remaining Airspace Excluding Final Cover

10,825,869 cubic yards

Net Remaining Waste Capacity at Current Compacted Density (1,660  $\frac{lb}{cu. yd}$ )

7,680,128 tons (WASTE, DDC + INTERS)

Current Compacted Density, 11/20/98 to 5/4/99 (WASTE, DDC, EOD + I / TOTAL AIRSPACE)

1,419 lb./cu. yd. (EXCLUDES WASTE COVER BUT INCLUDES DAILY COVER VO)

Waste:Cover Soil ratio, 11/20/98 to 5/4/99

5.78 : 1

Data and computations producing these results are detailed in Attachments 1 and 2. These estimates are believed accurate to approximately 1 percent (plus or minus).

Respectfully Submitted,

**A-Mehr, Inc.**

M. Ali Mehrazarin, PE

Principal Engineer

SEP-26-2000 01:33

P. 20

## ATTACHMENT 2

DISPOSAL GATE TONNAGES

Month	Year	Total to Landfill =	Waste Tons + ADC/Dirt/C&D <sup>4</sup> I	
Nov. 20-30	1998	17,759	17,132	627
December	1998	47,289	45,876	1,413
January	1999	38,222	37,580	642
February	1999	37,543	33,135	4,408
March	1999	46,930	40,009	6,921
April	1999	51,590	40,828	10,762
May 1- 4	1999	6,466	3,881	1,585
		<u>245,799</u>	<u>218,441</u>	<u>+ 26,358</u>

Source: Simi Valley Landfill site personnel, June 2, 1999

218,441 WASTE  
 26,358 WASTE  
 244,799 WASTE  
 8,287,441 WASTE  
 10,762 WASTE  
 1,585 WASTE

Simi Valley Landfill and Recycling Center  
Airspace Volume Calculation Report  
**May 5, 1999 Through November 3, 1999**

Prepared for:

Waste Management of California, Inc.  
Simi Valley Landfill and Recycling Center  
2801 Madera Road  
Simi Valley, California 93065  
(805) 579-7267

Prepared by:

A-Mehr, Inc.  
237 North Glassell Street  
Orange, California 92688  
714-633-5757  
Fax 714-633-5665

- We estimated the existing stockpile / final cover soil over the refuse to be a minimum of 839,804 CY ( Simi Valley Landfill completed the construction of Cell B-2 in early 1997. The construction included approximately 1,200,000 CY of excavation that was stockpiled on-site over the existing refuse areas. Simi Valley Landfill operation used 85,000 CY of this stockpiled material for daily soil cover and 20,000 CY for construction of Cell B-2 between 11/2/96 and 5/2/97. Between 5/2/97 and 11/3/97 landfill operation used 73,000 CY of the stockpiled material for daily soil cover. Between 11/4/97 and 5/18/98 landfill operation used 73,740 CY of the stockpiled material for daily soil cover. Between 5/19/98 and 11/19/98 landfill operation used 57,327 CY of the stockpiled material for daily soil cover. Between 11/20/98 and 5/4/99 landfill operation used 51,129 CY of the stockpiled material for daily soil cover. Between 5/4/99 and 11/3/99 landfill operation used 52,963 CY from the Cell B-3 construction area. The estimated soil stockpile available for daily soil cover and final cover is 839,804 CY).
- Based on construction of 3.5-foot-thick final cover soil over the intermediate cover soils in the closure area of 135.23 acres, we estimated total remaining final cover soil required for final closure of the site to be approximately 763,600 CY.

- We estimated the refuse to <sup>Stock Piled</sup> daily soil cover ratio to be approximately 5.16 to 1. Simi Valley Landfill and Recycling Center is currently using an Alternative Daily Cover "Term ADC" which reduced the amount of daily soil cover required for operation of the landfill. 5.167286576
- We estimated the refuse density to be 1,922 Pounds per cubic yard. 313997 T, 2000 lbs
- The estimated net airspace (gross airspace minus remaining final cover soil required) to be 10,499,231 CY. 326,638 CY

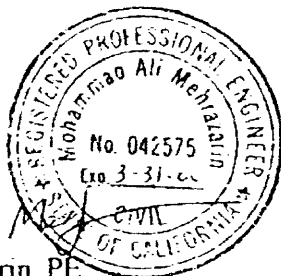
Our calculation and estimates should be accurate to approximately 1 percent (plus or minus).

Should you have any questions, please call me at 714-633-5757.

Respectfully,

A-Mehr, Inc.

M. Ali Mehrzarin, PE  
Principal Engineer



$$\begin{aligned} \text{CURRENT FILL RATE} \\ \frac{326,638 \text{ CY}}{\text{YEAR}} \times \frac{2}{\text{YEAR}} &= 653,276.09/\text{YR} \\ \text{SITE LIFE} &= \frac{10,499,231 \text{ CY}}{653,276.09/\text{YR}} = 16.07 \text{ YR} \end{aligned}$$

**Simi Valley Landfill and Recycling Center**

**Airspace Volume Calculation Report**

**November 20, 1998 Through May 4, 1999**

Prepared for:

Waste Management of California, Inc.  
Simi Valley Landfill and Recycling Center  
2801 Madera Road  
Simi Valley, California 93065  
(805) 579-7267

Prepared by:

A-Mehr, Inc.  
237 North Glassell Street  
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714-633-5757  
Fax 714-633-5665

**June 11, 1999**

**Simi Valley Landfill and Recycling Center  
Airspace Volume Calculation Report  
November 20, 1998 Through May 4, 1999**

This report presents the results of airspace volume calculations, using topographical maps dated November 19, 1998 and May 4, 1999, prepared by A-Mehr, Inc.

Methodology

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Final cover soil requirement was calculated assuming a 3.5 foot thick cover over the 135.2 acre area of the remaining permitted footprint. Subtracting this volume from the gross remaining airspace results in the net airspace available for waste and daily cover material.

Current density and cover soil usage were calculated as follows. Airspace used during the period November 20, 1998 - May 4, 1999 was determined from the two topographic surveys using the Terramodel software. Cover soil usage for the period was also determined using topographic data from the soil stockpile area. Waste tonnage for the period was obtained from Simi Valley Landfill scalehouse records. The compacted waste density and waste:cover soil ratio were readily calculated.

Results

Net Remaining Airspace Excluding Final Cover

Net Remaining Waste Capacity at Current Compacted Density  $(1,664.47 \frac{cy}{cu. yd})$  10,825,869 cubic yards

Current Compacted Density, 11/20/98 to 5/4/99 (Waste, Inc. & D.I. / Total Airspace) 7,680,128 tons (WASTE, INC. & D.I. / NET AIRSPACE)

Waste:Cover Soil Ratio, 11/20/98 to 5/4/99 1,419 lb./cu. yd.  $\left\{ \begin{array}{l} \text{EXCLUDES WT OF COVER} \\ \text{BUT INCLUDES DAILY COVER VOL} \end{array} \right.$

5.78 : 1

Data and computations producing these results are detailed in Attachments 1 and 2. These estimates are believed accurate to approximately 1 percent (plus or minus).

Respectfully Submitted,

A-Mehr, Inc.

*6.4 \* T / 800*

M. Ali Mehrazarin, PE  
Principal Engineer



# **ATTACHMENT 1** **Simi Valley Volume and Density Calculation** **June 11, 1999**

Total Volume between 5/4/99 and Final Grade

10,749,665 cy

Plus volume of existing soil stockpile

Original volume of stockpile @ 2/96

1,200,000

Used 2/96 - 5/97

(105,000)

Used 5/97 - 11/97

(73,000)

Used 11/97 - 5/98

(73,740)

Used 5/98 - 11/98

(57,327)

Used 11/98 - 5/4/99

(51,129)

Net remaining soil in stockpile

839,804 cy

Gross Remaining Airspace

11,589,469 cy

Estimated volume required for final cover soil @ 3.5 ft. thick over 135.2 acres

(763,600) cy

Net volume for waste and daily cover soil

10,825,869 cy

Estimated Volume required for daily cover at current ratio  $\frac{10,825,869}{5.78+1} =$

(1,597,554) cy

Net Remaining Volume for waste, ADC + CAD + I

9,228,315 cy

Net Remaining Waste Capacity @ current density  $9,228,315 \text{ cy} \cdot 1.664,477 =$

7,680,128 tons

## DENSITY CALCULATION

Gross tons landfilled WASTE, ADC + CAD + I

245,799 tons

Total Airspace used 11/20/98 - 5/4/99

346,477 cy

Cover soil used (FROM STOCKPILE)

- 51,129 cy

Net volume of waste, ADC + CAD + I

295,348 cy

Ratio, waste:cover soil volume  $\frac{295,348 \text{ cy}}{51,129 \text{ cy}} =$

5.78 : 1

Density WASTE, ADC + CAD + I COMPRESSED IN PLACE 1,419 lb/cy

IN TOTAL AIRSPACE USED INCLUDING COVER VOL.

245,799 T WASTE, ADC  
 295,348 CY WASTE, ADC  
 295,348 CY WASTE, ADC  
 = .8322351947 CY  
 x 2000 LB/CY  
 = 1,664.47 LB/CY  
 FOR WASTE, ADC + CAD + I  
 COMPRESSED IN PLACE  
 EXCLUDING COVER VOL.

2000lb 218,441 T REFUSE ONLY

x 346,477 cy

= 1260.9 LB/CY

REFUSE ONLY DENSITY

1/20 - 5/4/99

245,799 T WASTE, ADC + CAD + I

346,477 CY TOTAL AIRSPACE USED

= 703,437 T : 2000 LB/CY

= 1,418.85 LB/CY

7,680,128 T

= 2(8.2874 - 1)

(8.28)/325.85 = 6.853131 X 10

WASTE

ONLY

P.04

## ATTACHMENT 2

DISPOSAL GATE TONNAGES

Month	Year	Total to Landfill = WRS + DRS	Waste Tons + ADC/Dirt/C&D + I	
Nov. 20-30	1998	17,759	17,132	627
December	1998	47,289	45,876	1,413
January	1999	38,222	37,580	642
February	1999	37,543	33,135	4,408
March	1999	46,930	40,009	6,921
April	1999	51,590	40,828	10,762
May 1-4	1999	6,466	3,881	1,585
		245,799	218,441	+ 26,358

Source: Simi Valley Landfill site personnel, June 2, 1999

$$\frac{218,441}{218,441} = 2.648 \text{ over DRS}$$

5770

$$\frac{218,441 \text{ WASTE}}{26,350 \text{ WASTE}} = 8.287464905$$

By WRS  
WRS  
WRS